

## **APPENDIX A**

### **STATEMENT OF WORK**

#### **Terminal 117 Upland Sampling Area Lower Duwamish Waterway Superfund Site Seattle, Washington**

#### **I. PURPOSE**

The purpose of this Statement of Work (SOW) is to fully implement the Administrative Settlement Agreement and Order on Consent (Settlement Agreement) for upland soil sampling to characterize surface and subsurface contamination for all appropriate contaminants based on past historic practices and past upland investigations. The prime purposes of the investigation are to characterize the upland to 1) enable EPA to select an upland removal action that will be protective of human health and the environment and 2) generate enough information about the extent of upland contamination in order to effectively reduce any potential for recontamination of the lower bank, mudflat and sediments adjacent to the T-117 upland area. The data gathered under this SOW will also supplement existing data that was collected to develop the Engineering Evaluation/Cost Analysis (EE/CA) for the T-117 Early Action Area (EAA) (Windward 2005). The data generated under this SOW may affect the proposed T-117 EAA bank/mudflat/sediment removal area (addressed under a separate EPA Settlement Agreement) in the following ways:

- The additional data collected may influence the upland extent of the proposed EAA bank/mudflat/sediment removal which is occurring as a Non-Time Critical Removal (NTCRA) under a separate Settlement Agreement.
- Additional data may influence the way in which the construction phase of the NTCRA (i.e., bank removal and replacement) is managed and scheduled to prevent recontamination of adjacent sediments.
- Additional data may be the basis for the recommendations by the Port for any future or additional upland actions consistent with the T-117 Source Control Action Plan and the Source Control Strategy for the Lower Duwamish Waterway.
- Additional data characterization will inform future actions by enabling the Port to establish institutional controls to effectively manage any future surface and sub-surface excavation, thereby preventing recontamination of the bank and sediments.

The work completed under this SOW shall include preparation and delivery of and implementation of the following:

- 1) Draft and Final Work Plan;
- 2) Draft and Final Quality Assurance Project Plan;
- 3) Data Validation Report, Draft and Final Data Report and Technical Memorandum; and
- 4) Community Involvement Activities.

Activities shall be completed according to the schedule in Table 1. It is anticipated that this work will be complete before the T-117 EAA NTCRA design is approved. As noted above, additional removal actions, independent of the bank and sediment removal action, may occur as a result of the sampling conducted under this Settlement Agreement. These additional removal actions will be addressed under a separate EPA Settlement Agreement

## **II. WORK TO BE PERFORMED BY RESPONDENT**

### **Task 1- Workplan for Upland Investigation Tasks**

The Respondent will submit a workplan detailing the technical work to be conducted for tasks 2-4 below. At a minimum the workplan will include the following sections:

- Introduction/Purpose
- Site Background
- Project Objectives
- Summary of T-117 Upland Investigation Tasks 2-4 (including information of how these tasks relate to planned T-117 NTCRA work)
- Schedule
- References

The draft and final versions of the Workplan are identified in the Project Schedule on Table 1 as SOW deliverables 1 and 2, respectively.

### **Task 2 – Quality Assurance Project Plan**

The Respondent shall document the procedures necessary for conducting all field activities and sampling analyses in a quality assurance project plan (QAPP). The QAPP will ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that data meet data quality objectives. Additional details are provided in Section III of this SOW.

Along with the QAPP, Respondent shall submit a Health and Safety Plan that is designed to protect on-site personnel and area residents from physical, chemical, and all other hazards posed by field sampling efforts.

Respondent shall also include a summary of the existing site data with a list of document references. Upon request by EPA, Respondent shall also submit copies of cited documents (e.g., reports or technical memoranda) containing data from previous upland studies or sampling efforts at T-117.

The draft and final versions of the QAPP are identified in the Project Schedule on Table 1 as SOW deliverables 3 and 4, respectively.

### **Task 3 – Data Validation Report, Data Report and Technical Memorandum**

Respondent shall submit the data validation report for data from this field effort to EPA within fifteen (15) working days of receiving the raw data from the contract laboratory. The Respondent shall also provide information sufficient for EPA to perform an independent review of the validated data. The data validation report is identified in the Project Schedule on Table 1 as SOW deliverable 5.

#### ***Data Report Section***

The Data Report section of this deliverable will include all information regarding any field sampling event(s). At a minimum, this includes the types of information listed below.

- Introduction/Purpose
- Summary of field sampling effort – to include
  - description of sampling equipment and field methods,
  - sampling dates,
  - sample descriptions and field observations (e.g., characteristics of vertical sample profiles, odors, coloration/staining),
  - tabular summary of sample locations with exact coordinates,
  - tabular summary of data by sample location and interval, and
  - figures/maps showing sampled locations and intervals with data
- Map(s) showing the extent of surface and sub-surface contamination, any sub-surface structures (e.g., buried slabs, lenses of asphalt) during the investigation, and any sub-surface utilities or utility corridors (e.g., septic fields, drain tiles, sumps)
- Deviations from the QAPP
- Summary description of sample handling and shipment and an appendix with chain-of-custody forms for all samples
- Summary of data validation report
- Application files with data tables, maps GIS coordinates and figures (\*.pdf, \*.xls, \*.shp or other)

### ***Technical Memorandum Section***

The Technical Memorandum section, based on review of the new data collected in this investigation coupled with historical upland data from T-117, will include:

- Recommendations for management of upland soils based on lessons learned from the response actions carried out at T-117 in 1999-2000 (e.g., containment, removal)
- Recommendations for upland removal action(s)
- Recommendations for institutional controls
- Recommendations for modifications to the inshore boundary of the T-117 EAA NTCRA.

The draft and final versions of the Data Report and Technical Memorandum are identified in the Project Schedule on Table 1 as SOW deliverables 6 and 7, respectively.

### **Task 4 - Community Involvement Activities**

As requested by EPA, Respondent shall provide information supporting EPA's community involvement programs related to the Work performed pursuant to this Settlement Agreement and shall participate in public meetings that may be held or sponsored by EPA to discuss activities concerning Work performed pursuant to this Settlement Agreement.

Respondent shall coordinate with EPA on any other community involvement activities they undertake related to the Work performed pursuant to this Settlement Agreement.

Upon request by EPA, Respondent shall submit copies of plans, technical memoranda, validated data with raw data, and other reports to EPA except those documents that are privileged. These potential deliverables may be shared with the public and are identified in the Project Schedule on Table 1 as optional and due upon request.

## **III. CONTENT OF SUPPORTING PLANS**

### ***Quality Assurance Project Plan***

Respondent shall develop a project-specific Quality Assurance Project Plan (QAPP) for sample analysis and data handling which will apply to all samples collected inland from the currently proposed sediment/bank NTCRA boundary. The QAPP shall be based upon this Settlement Agreement and SOW, and upon EPA guidance. The QAPP will be prepared in accordance with "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001) and "Guidance on Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002).

The QAPP will define in detail the sampling and data-gathering methods that will be used. It must also include sampling objectives, a detailed description of sampling activities including sample locations, sample analyses, sampling equipment and procedures, station positioning, sample handling (e.g., sample containers and labels, sample preservation, chain-of-custody), and a schedule for sampling and analyses.

The QAPP will also describe the quality assurance and quality control protocols necessary to achieve the data quality objectives proposed by the Respondent. The QAPP will address sampling procedures, sample custody, analytical procedures, and data reduction, validation, reporting, and personnel qualifications. The laboratory performing the work must have and follow an approved Quality Assurance (QA) program, which complies with “EPA Requirements for Quality Management Plans (QA/R-2)” (EPA/240/B-01-002, March 2001) or equivalent documentation as determined by EPA. If a laboratory not in the EPA Contract Laboratory Program (CLP) is selected, the QAPP shall be consistent with the requirements of the CLP for laboratories proposed outside the CLP. Respondent will provide assurances that EPA has access to laboratory personnel, equipment and records for sample collection, transportation, and analysis.

All sampling and analyses performed pursuant to this Settlement Agreement shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control (QA/QC), data validation, and chain-of-custody procedures. Respondent shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with the appropriate EPA guidance.

Upon request by EPA, Respondent shall have a laboratory analyze samples submitted by EPA for quality-assurance monitoring. Respondent agrees that EPA personnel may audit any laboratory that performs analytical work under this Settlement Agreement. Prior to awarding any work to an analytical laboratory, Respondent will inform the laboratory that an audit may be performed, and that the laboratory agrees to coordinate with EPA prior to performing analyses. Respondent shall provide to EPA the quality assurance/quality control procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

Upon request by EPA, Respondent shall allow EPA or its authorized representatives to take split and/or duplicate samples. Respondent shall notify EPA no less than 14 working days in advance of any sample collection activity, unless shorter notice is agreed to by EPA. EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall allow Respondent to take split or duplicate samples of any samples it takes as part of its oversight of Respondent’s implementation of the Work.

All analytical data collected under this Settlement Agreement shall be provided electronically to EPA.

### ***Health and Safety Plan(s)***

The Health and Safety Plan(s) ensure protection of public health and safety during performance of on-site Work under this Order. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. Respondent shall incorporate all changes to the plan recommended by EPA and shall implement the plan during the actual sampling event and as appropriate during any pre-sampling preparation.

## **IV. SUMMARY OF MAJOR DELIVERABLES/SCHEDULE**

The schedule for submission to EPA of deliverables described in the SOW is presented in Table 1. Note that completion of activities in this SOW shall occur prior to the completion of the design effort for the T-117 EAA NTCRA. All days are in working days.

<b>TABLE 1 – Project Schedule</b>			
<b>Task Number</b>	<b>Deliverable Number</b>	<b>Deliverable Title</b>	<b>Due Date</b>
1	1	Draft Workplan	Within 5 days after effective date of Settlement Agreement
1	2	Final Workplan	Within 7 days of receiving EPA comments on draft Workplan
2	3	Draft QAPP	Within 10 days of Workplan approval notification
2	4	Final QAPP	Within 10 days of receiving EPA comments on draft QAPP
3	5	Data Validation Report	Within 15 days of receiving raw data
3	6	Draft Data Report and Technical Memorandum	Within 30 days after Field Work Completion
3	7	Final Data Report and Technical Memorandum	Within 14 days of receiving EPA comments on draft Data Report & Technical Memorandum
4	optional	Plans, technical memoranda, validated data, other reports not privileged	Upon EPA request